

REMARKS

In accordance with the forgoing, claims 63 and 64 have been cancelled, claims 1, 2, 12-14, 16, 19, 20, 22, 24, 25, 35-37, 39, 42, 43, 45, 47-50, 54-56, 58, 61 and 62 have been amended, and new claims 65-71 have been added. The following remarks are respectfully submitted.

I. Objections to the Claims

Claims 22 and 45 were objected to because of informalities. Claims 22 and 45 have been amended herein to address the informality. Accordingly, it is respectfully requested that the objections be withdrawn.

II. Rejections under 35 USC §112

A number of claims were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended the claims herein to address the format of Markush groupings, to eliminate references to the term “metric,” and to provide antecedent basis for claim limitations.

Regarding claims 19 and 20, confusion regarding the term “different electrode” has been addressed by the following amendment to claim 19:

“performing a cross-check of the measured impedance values ~~wherein at least one of the first electrode or the second electrode comprises a different electrode using an alternate impedance measurement pathway.~~” Support for the above amendment is provided at paragraph [00129] of the specification.

Accordingly, it is respectfully requested that the rejections be withdrawn.

III. Rejections under 35 USC §102

Claims 1-13, 17-20, 22, 24-36, 40-43, 45, 47-55 and 59-64 stand rejected under 35 USC § 102(b) as being anticipated by Kimchi et al. (US 5,360,123).

Claims 1-64 stand rejected under 35 U.S.C. 102(e) as being anticipated by Stadler et al. (US Patent Publication 20040172080).

As amended herein, independent claim 1 recites:

1. *A method of monitoring intra-thoracic fluid content, comprising:
measuring intra-thoracic impedance between a first electrode and a second electrode at a time point relative to a cardiac cycle, said time point characterized by a reduced amount of electrical noise due to reduced electrical and mechanical cardiac activity and providing a cardiac-gated impedance measurement;
removing at least a portion of remaining noise from the impedance measurement;
storing the filtered impedance measurement;
performing the first three steps at the time point relative to the cardiac cycle for a predetermined number of cardiac cycles to thereby generate a set of filtered impedance data; and
mathematically manipulating the set of impedance data to render a representative impedance for said set of impedance data.*

Support for the above amendment is provided at paragraph [00100] of the specification, which states, “The **cardiac-gated impedance measurements**, i.e., impedance measurements acquired at a fixed **time point relative to the cardiac cycle**, will not vary due to the heart volume or motion. By averaging a series of cardiac-gated impedance measurements obtained sequentially over more than one respiration cycle, respiratory influences on the impedance measurement are removed.” (Emphasis added.)

Neither the Kimchi nor the Stadler reference teach or suggest providing a cardiac-gated impedance measurement by measuring intra-thoracic impedance

between a first electrode and a second electrode at a time point relative to the cardiac cycle. Nor do the references teach or suggest performing the measurement for a predetermined number of cardiac cycles to generate a set of impedance data. By contrast, the cited references illustrate continuous impedance monitoring (see Kimchi, Fig. 5B), which does not reduce the effects of cardiac noise. Claim 1 as amended is therefore believed to be patentable over the Kimchi and Stadler references.

Claims 2-23 depend, either directly or indirectly, from independent claim 1 and are therefore believed to be patentable for at least the reasons given above with respect to claim 1, and for other reasons as well.

For reasoning analogous to that provided above with respect to claim 1, independent claims 24, 47 and 49, and all claims depending therefrom, are also believed to be patentable.

IV. Conclusion

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned attorney to attend to these matters.

Respectfully submitted,

Date: April 12, 2006

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